

AMENDMENTS TO THE CLAIMS

Claim 1. (currently amended) A video data processing device comprising:

a degree of coding difficulty computing means for computing the degree of coding difficulty from the input video data comprising a motion compensation remaining difference computing means for computing a motion compensation remaining difference and computing the degree of coding difficulty on the basis of the motion compensation remaining difference; the motion compensation remaining difference being computed as a difference between a V-filtered and motion compensated block of the input video data and an original corresponding block of the input video data;

a filtering means for adaptively filtering said input video data using a transfer function on the basis of the degree of coding difficulty computed from said input data;

a compression-coding means for compression-coding said input and filtered video data;

a decoding means for decoding said compression-coded video data;

a degree of coding difficulty computing means for computing the degree of coding difficulty from said decoded video data; and

an image quality correcting means for adaptively correcting the image quality of said decoded video data using a transfer function on the basis of the degree of coding difficulty computed from said decoded video data.

Claim 2. (canceled)

Claim 3. (original) The video data processing device according to claim 1, wherein said degree of coding difficulty computing means comprises a motion vector difference computing means for computing the difference of motion vectors in adjacent block and computes the degree of coding difficulty on the basis of the motion vector difference computed by said motion vector difference computing means.

Claim 4. (canceled)

Claim 5. (currently amended) The video data processing device according to claim 1, wherein said motion compensation remaining difference computing means computes the motion compensation remaining difference on a block by block basis.

Claim 6. (currently amended) The video data processing device according to claim 1, wherein said motion compensation remaining difference computing means computes the motion compensation remaining difference on a scene by scene basis.

Claim 7. (currently amended) The video data processing device according to claim 1, wherein said motion compensation remaining difference computing means comprises a means for computing the motion compensation remaining difference on a block by block basis and a means for computing the motion compensation remaining difference on a scene by scene basis.

Claim 8. (original) The video data processing device according to claim 3, wherein said motion vector difference computing means computes the motion vector difference on a block by block basis.

Claim 9. (original) The video data processing device according to claim 3, wherein said motion vector difference computing means computes the motion vector difference on a scene by scene basis.

Claim 10. (original) The video data processing device according to claim 3, wherein said motion vector difference computing means comprises a means for computing the motion vector difference on a block by block basis and a means for computing the motion vector difference on a scene by scene basis.

Claim 11. (original) The video data processing device according to claim 1, wherein said filtering means adaptively performs a filtering operation on the basis of the coding compression ratio and the degree of coding difficulty as computed from said input video data.

Claim 12. (original) The video data processing device according to claim 1, further comprising:

a recording/reproduction means for recording/reproducing compression-coded video data by way of a recording medium; and

said decoding means being adapted to decode the video data reproduced from said recording medium by said recording/reproduction means.

Claim 13. (original) A video data processing method comprising steps of:

computing the degree of coding difficulty on the basis of a motion compensation remaining difference computed from the input video data; the motion compensation remaining difference being computed as a difference between a V-filtered and motion compensated block of the input video data and an original corresponding block of the input video data;

adaptively filtering said input video data using a transfer function on the basis of the degree of coding difficulty computed from said input data;

compression-coding said input and filtered video data;

decoding said compression-coded video data; and

computing the degree of coding difficulty from said decoded video data; and

adaptively correcting the image quality of said decoded video data using a transfer function on the basis of the degree of coding difficulty computed from said decoded video data.

Claim 14. (canceled)

Claim 15. (original) The video data processing method according to claim 13, wherein the difference of motion vectors in adjacent block is computed from the video data in said degree of coding difficulty computing step and the degree of coding difficulty is computed on the basis of the computed motion vector difference.

Claim 16. (original) The video data processing method according to claim 13, wherein the motion compensation remaining difference and the difference of motion vectors in adjacent block are computed from the video data in said degree of coding difficulty computing step and the degree of coding difficulty is computed on the basis of the computed motion compensation remaining difference and the computed motion vector difference.

Claim 17. (original) The video data processing method according to claim 13, wherein a filtering operation is adaptively performed on said input video data on the basis of the coding compression ratio and the degree of coding difficulty as computed from said input video data in said filtering step.

Claim 18. (original) The video data processing method according to claim 13, further comprising:

a step of recording/reproducing compression-coded video data by way of a recording medium; and

the video data reproduced from said recording medium in said recording/reproducing step being decoded in by said recording/reproduction means.

Claim 19. (currently amended) A video data processing device comprising:

a degree of coding difficulty computing means for computing the degree of coding difficulty on the basis of a motion compensation remaining difference computed from the input video data; the motion compensation remaining difference being

computed as a difference between a V-filtered and motion compensated block of the input video data and an original corresponding block of the input video data;

a filtering means for adaptively filtering said input video data using a transfer function on the basis of the degree of coding difficulty computed from said input data and the compression ratio;

a compression-coding means for compression-coding said input and filtered video data;

a decoding means for decoding said compression-coded video data;

a degree of coding difficulty computing means for computing the degree of coding difficulty from said decoded video data; and

an image quality correcting means for adaptively correcting the image quality of said decoded video data using a transfer function on the basis of the degree of coding difficulty computed from said decoded video data and the compression ratio.

Claim 20. (currently amended) A video data processing method comprising steps of:

computing the degree of coding difficulty on the basis of a motion compensation remaining difference computed from the input video data; the motion compensation remaining difference being computed as a difference between a V-filtered and motion compensated block of the input video data and an original corresponding block of the input video data;

adaptively filtering said input video data using a transfer function on the basis of the degree of coding difficulty computed from said video data and the compression ratio;

compression-coding said input and filtered video data;

decoding said compression-coded video data;
computing the degree of coding difficulty from said decoded video data; and
adaptively correcting the image quality of said decoded video data using a transfer function on the basis of the degree of coding difficulty computed from said decoded video data and the compression ratio.

Claim 21. (new) A video data processing device, comprising:

noise reduction means for reducing noise in an input video data, including:

motion compensation means for generating a motion compensation remaining difference data on the basis of said input video data;

degree of coding difficulty computing means for computing a degree of field coding difficulty data and a degree of block coding difficulty data for the input video data on the basis of the motion compensation remaining difference; and

field memory means for field delaying said degree of block coding difficulty data to produce a field-delayed degree of block coding difficulty data;

filtering means for adaptively filtering the noise-reduced input video data using a transfer function on the basis of the degree of field coding difficulty data and the field-delayed degree of block coding difficulty data; and

compression-coding means for compression-coding the adaptively-filtered input video data.

Claim 22. (new) The video data processing device according to claim 21, further comprising a scene change detection means for detecting scene changes in the input video data to produce a scene change data; and

said filtering means adaptively filters the noise-reduced input video data using a transfer function on the basis of the degree of field coding difficulty data, the field-delayed degree of block coding difficulty data, and the scene change data.

Claim 23. (new) A video data processing method, comprising the steps of:

reducing noise in an input video data, by:

generating a motion compensation remaining difference data on the basis of said input video data;

computing a degree of field coding difficulty data and a degree of block coding difficulty data for the input video data on the basis of the motion compensation remaining difference; and

field delaying said degree of block coding difficulty data to produce a field-delayed degree of block coding difficulty data;

adaptively filtering the noise-reduced input video data using a transfer function on the basis of the degree of field coding difficulty data and the field-delayed degree of block coding difficulty data; and

compression-coding the adaptively-filtered input video data.

Claim 24. (new) The video data processing method according to claim 23, further comprising a step of detecting scene changes in the input video data to produce a scene change data; and

said adaptive filtering step adaptively filters the noise-reduced input video data using a transfer function on the basis of the degree of field coding difficulty data, the field-delayed degree of block coding difficulty data, and the scene change data.